

Maryland Historical Trust

Maryland Inventory of Historic Properties number: PG: 67-29
Name: SUNNYSIDE AVE. OVER INDIAN CREEK

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended _____	Eligibility Not Recommended <u>X</u>
Criteria: <u> </u> A <u> </u> B <u> </u> C <u> </u> D Considerations: <u> </u> A <u> </u> B <u> </u> C <u> </u> D <u> </u> E <u> </u> F <u> </u> G <u> </u> None	
Comments: _____ _____ _____	
Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

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MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. PG:67-29

SHA Bridge No. P-189 Bridge name Sunnyside Avenue over Indian Creek

LOCATION:

Street/Road name and number [facility carried] Sunnyside Avenue

City/town Beltsville Vicinity X

County Prince George's

This bridge projects over: Road _____ Railway _____ Water X Land _____

Ownership: State _____ County X Municipal _____ Other _____

HISTORIC STATUS:

Is the bridge located within a designated historic district? Yes _____ No X

National Register-listed district _____ National Register-determined-eligible district _____
Locally-designated district _____ Other _____

Name of district _____

BRIDGE TYPE:

Timber Bridge _____:

Beam Bridge _____ Truss -Covered _____ Trestle _____ Timber-And-Concrete _____

Stone Arch Bridge _____

Metal Truss Bridge _____

Movable Bridge _____:

Swing _____ Bascule Single Leaf _____ Bascule Multiple Leaf _____
Vertical Lift _____ Retractable _____ Pontoon _____

Metal Girder X _____:

Rolled Girder X _____ Rolled Girder Concrete Encased _____
Plate Girder _____ Plate Girder Concrete Encased _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete _____:

Concrete Arch _____ Concrete Slab _____ Concrete Beam _____ Rigid Frame _____
Other _____ Type Name _____

DESCRIPTION:

Setting: Urban _____ Small town _____ Rural X

Describe Setting:

Bridge No. P-189 carries Sunnyside Avenue over Indian Creek in Prince George's County. Sunnyside Avenue runs east-west while Indian Creek flows north to south. The bridge is located within the National Agricultural Research Center in a wooded area.

Describe Superstructure and Substructure:

Bridge No. P-189 is a single-span, 2-lane, metal girder bridge. The bridge was originally built in 1946 and the deck was replaced in 1974. The structure is 32 feet long and has a clear roadway width of 22 feet. There are no sidewalks on the structure. The out-to-out width is 22.5 feet. The superstructure consists of nine (9) rolled girders which support a corrugated structural plate deck and a 5 inch concrete slab. W-section guardrails are supported by railing posts attached to the exterior girders. The girders are 1.3 feet x 7 inches and are spaced 1.6 feet apart. The roadway is carried on the girders. The substructure consists of two (2) reinforced concrete abutments. There are four (4), flared wing walls. The bridge is not posted, and has a Prince George's County sufficiency rating of 49.3.

According to the 1995 inspection report, this structure was in fair condition with spalling, rusting and section loss. The deck has spalls with areas of exposed reinforcement bars on the wearing surface. The corrugated steel plate is heavily rusted with section loss. The guardrails have areas of 100 percent section loss and the west end of the south railing is missing posts as a result of a vehicular accident. The steel girders have moderate rust, scaling and up to 25 percent section loss in the web and 60 percent loss in the bottom flange. Both abutments have spalling, cracking and efflorescence below the girders. The concrete in the abutments under the exterior girders is severely cracked and loose.

Discuss Major Alterations:

According to the 1995 inspection report, the only alteration to the bridge was the replacement of the deck. A reinforced concrete slab was replaced with a corrugated metal plate and a 5 inch concrete slab in 1974.

HISTORY:

WHEN was the bridge built: 1946

This date is: Actual X Estimated _____

Source of date: Plaque _____ Design plans _____ County bridge files/inspection form X

Other (specify) _____

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer?

Unknown

WHO was the builder?

Unknown

WHY was the bridge altered?

The bridge was altered to correct functional or structural deficiencies.

Was this bridge built as part of an organized bridge-building campaign?

There is no evidence that the bridge was built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:

A - Events _____ **B- Person** _____
C- Engineering/architectural character _____

The bridge does not have National Register significance.

Was the bridge constructed in response to significant events in Maryland or local history?

Metal girder bridges were most likely introduced and first popularized in Maryland by the state's major railroads of the nineteenth century including the Baltimore and Susquehanna, its successor the Northern Central, and the Baltimore and Ohio Railroad. Bridge engineering historians have documented the fact that James Milholland (or Mulholland) erected the earliest plate girder span in the United States on the Baltimore and Susquehanna Railroad in 1846 at Bolton Station, near present-day Mount Royal Station. The sides (web) and bottom flange of Milholland's 54-foot-long span were wholly of wrought iron and included a top flange reinforced with a 12x12-inch timber. Plates employed in the bridge were 6 feet deep and 38 inches wide, giving the entire bridge a total weight of some 14 tons. Milholland's pioneering plate girder cost \$2,200 (Tyrrell 1911:195). By December 31, 1861, the Northern Central Railroad, which succeeded the Baltimore and Susquehanna, maintained an operating inventory in Maryland of 50 or more bridges described simply as "girder" spans, in addition to a number of Howe trusses. Most of these were probably iron girder bridges; the longest were the 117-foot double-span bridge over Jones Falls and the 106-foot double-span girder bridge at Pierce's Mill (Gunnarson 1990:179-180).

As in the nation, girder bridge technology in Maryland was quickly adapted to cope with the increasingly heavy traffic demands of the twentieth century caused by automobile and truck traffic. The 1899 Maryland Geological Survey report on highways noted that "there are comparatively few I-beam bridges, one of the cheapest and best forms for spans less than 25 or 30 feet" (Johnson 1899:206). Interestingly, the report also urged construction of a composite metal, brick, and concrete bridge, noting that "no method of construction is more durable than the combination of masonry and I-beams, between which are transverse arches of brick, the whole covered with concrete, over which is laid the roadway" (Johnson 1899:206). Whether any such bridges (transitional structures between I-beams and reinforced concrete spans) were built is unknown.

Official state and county highway reports—issued between 1900 and the early 1920s through the Highway Division of the Maryland Geological Survey and its successor, the State Roads Commission—generally do not reference or describe girder construction. An analysis of the current statewide listing of county and municipal bridges (a listing maintained by the State Highway

Administration) reveals that 48 county bridges, out of the total of 141 approximately dated to "1900" by county engineers, were listed as steel girder, steel stringer, or variants of such terms. (It should be noted that the "1900" date is often given when no exact date is pinpointed for a bridge that is clearly old). A grand total of 200 bridges (including "steel culverts"), out of 550 bridges dated on the county list between 1901 and 1930, were described as steel beam, steel girder, or steel stringer and girder varieties. The total suggests that among the various highway bridge types built in the early twentieth century metal girder bridges in Maryland between 1900 and 1930 were second in popularity only to reinforced concrete bridges. However, these numbers must be interpreted with caution, as they do not necessarily include all county and municipal bridges.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

A significant example of a metal girder bridge should possess character-defining elements of its type, and be readily recognizable as an historic structure from the perspective of the traveler. The integrity of distinctive features visible from the roadway approach, including parapet walls or railings, is important in structures which are common examples of their type. In addition, the structure must be in excellent condition. This bridge has considerable deterioration and is an undistinguished example of a metal girder bridge.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains much of the character-defining elements of its type, however, the integrity of these elements has been compromised by severe deterioration.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

County inspection/bridge files X SHA inspection/bridge files
Other (list):

Gunnarson, Robert
1990 *The Story of the Northern Central Railway, From Baltimore to Lake Ontario*. Greenberg Publishing Co., Sykesville, Maryland.

Johnson, Arthur Newhall

1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland*.
Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

Tyrrell, Henry G.

1911 *History of Bridge Engineering*. Published by author, Chicago.

SURVEYOR:

Date bridge recorded 2/25/97

Name of surveyor Caroline Hall/Tim Tamburrino

Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204

Phone number (410) 296-1685 **FAX number** (410) 296-1670

Maryland Historic Highway Bridges

Bridge Type METAL GIRDER

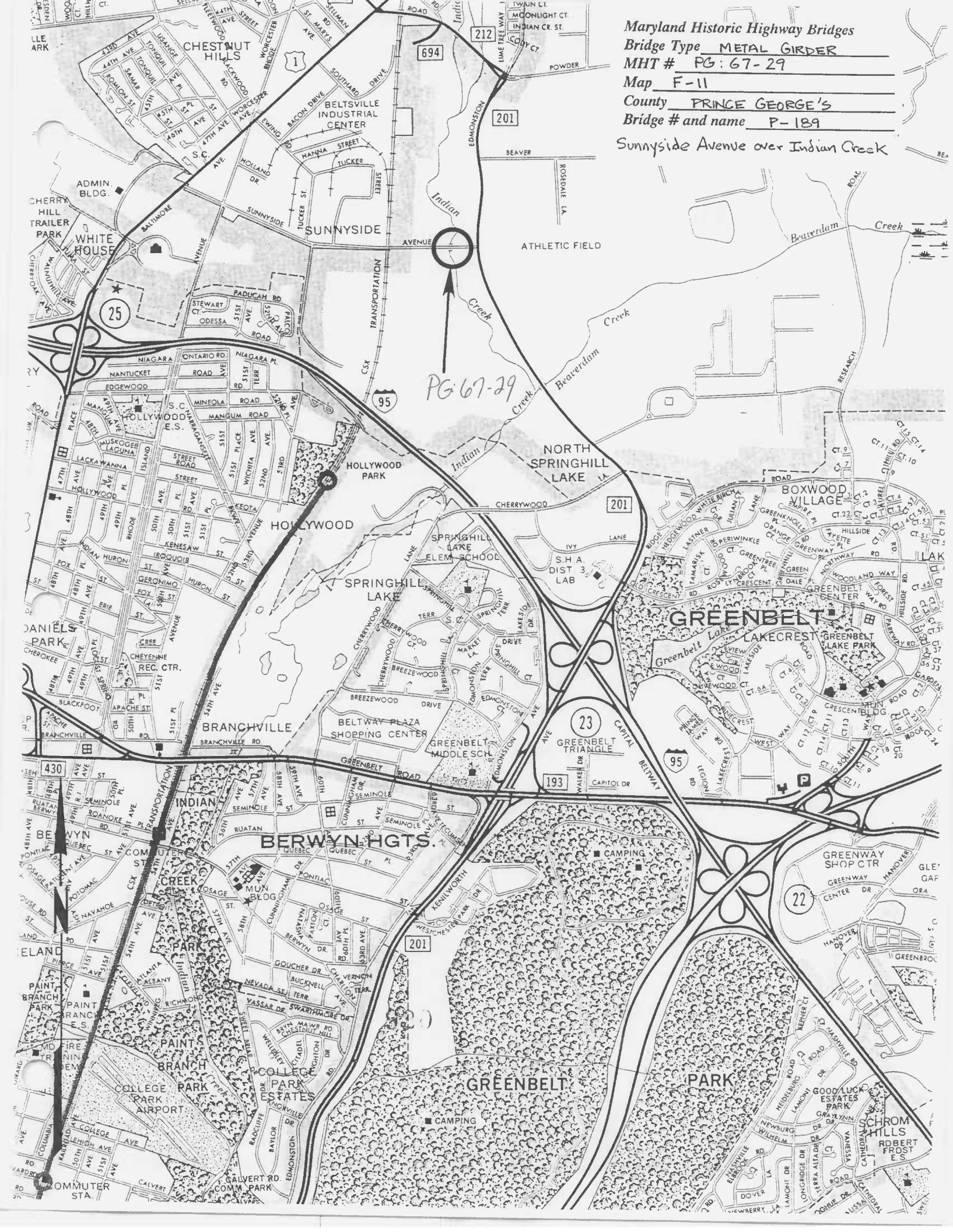
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Map F-11

County PRINCE GEORGE'S

Bridge # and name P-189

Sunnyside Avenue over Indian Creek





1. PG: 67-29

2. Sunnyside over Indian Creek

3. Prince George's Co. MD

4. Tim Tam burrito

5. 3-97

6. MD SHPO

7. West approach

8. 1 of 6



1. PG: 67-29
2. Sunnyside Avenue over Indian Creek
3. Prince Georges Co, MD
4. Tim Tamburino
5. 3-97
6. MD SHPO
7. East approach
8. 2 of 6



1. PG: 67-29
2. Sunnyside Avenue over Indian Creek
3. Prince George's Co. MD
4. Tim Tamburino
5. 3-97
- 6 MD SHPO
- 7 South elevation
8. 3 of 6



1 PG. 67-29

2 Sunny side Avenue over Indian Creek

3 Prince George's Co. MD

4 Tim Tamburino

5 3-97

6 MD SHPO

7 North elevation

8 4 of 6



1. PG: 67-29
2. Sunnyside Avenue over Indian Creek
3. Prince Georges Co. MD
4. Tim Tamburino
5. 3-97
6. MD SHPO
7. Detail of South elevation
8. 5 of 6



1. PG: 67-29
2. Sunnyside Avenue over Indian Creek
3. Prince Georges Co. MD
4. Tim Tamburino
5. 3-97
6. MD S&PO
7. East abutment
8. 6 of 6